EPA Region IX and California Water Resources Control Board

NPDES Compliance Evaluation Inspection (CEI) Report

Name and Location of Facility Inspected	**Entry Date**	**Permit Effective Date**
City of Eureka - Elk River Wastewater Treatment Facility 4301 Hilfiker Lane Eureka, CA 95503	3/15/2013 **Entry Time** 8:00 AM	7/24/2009

NPDES Permit Number	**Order Number**		**County**	**Permit Expiration Date**
CA0024449	R1-2009-0033	☒ **Major** ☐ **Minor**	Humboldt County	7/24/2014

Name(s) & Title(s) of On-Site Representative(s)	**Contact Information**	**Notified of Inspection?**
Bruce Gehrke (Utility Operations Manager)	Phone: (707) 441-4360 Fax: (707) 441-4366 E-mail: bgehrke@ci.eureka.ca.gov	☒ **Yes** ☐ **No**

Name, Title & Address of Responsible Official	**Contact Information**	**Official Contacted?**
Bruce Young (Public Works Director) 531 K Street Eureka, CA 95501	Phone: (707) 441-4203 Fax: (707) 441-4202 E-mail: byoung@ci.eureka.ca.gov	☐ **Yes** ☒ **No**

Inspector(s)	**Presented Credentials?**
Primary: Craig Blett (PG Environmental, LLC) **Other(s):** Cathy Goodwin (North Coast Water Board)	☒ **Yes** ☐ **No**

Weather Conditions at the Time of the Inspection:	**Facility Receiving Water Name:**
Overcast; light precipitation within the past 24 hours	Humboldt Bay

Overview of Areas Evaluated During Inspection

S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated

Permit: S	Flow Measurement: U	Biosolids/Solid Waste Handling & Disposal: S
Records/Reports: M	Self-Monitoring Program: S	Compliance Schedules: N
Facility Site Review: S	Laboratory: S	Pretreatment (POTWs Only): N
Effluent and Receiving Waters: S	Operations & Maintenance: M	Stormwater: U

Prepared By: Craig Blett (PG Environmental, LLC) on 3/25/2013

Reviewed By: Max Kuker (PG Environmental, LLC) on 3/29/2013

Report Date: 3/29/2013

Facility Narrative

On March 15, 2013 a USEPA contractor along with a representative from the North Coast Water Board inspected the City of Eureka – Elk River Wastewater Treatment Facility in Eureka, CA. Discharges from the Facility are regulated by North Coast Water Board Order No. R1-2009-0033 (NPDES Permit No. CA0024449). The primary purpose of the inspection was to determine the accuracy and reliability of the Discharger's self-monitoring and reporting program. The primary on-site Facility representative was Bruce Gehrke (Utility Operations Manager).

The City of Eureka (City or Discharger) owns and operates the Elk River Wastewater Treatment Facility (Facility). The Facility treats residential and commercial wastewater from the City of Eureka and the Humboldt Community Services District, which includes approximately 50,000 residents. There are two significant industrial users discharging to the Facility.

The Facility provides secondary level treatment of wastewater. Treatment consists of preliminary screening, grit removal, primary clarification, trickling filtration, solids contact, secondary clarification, chlorination, effluent holding pond storage and dechlorination. The treated effluent is then directed to Humboldt Bay during low tide through Discharge Point 001. Sludge processing consists of digestion and pond storage.

The inspectors visually evaluated the treatment train in order from headworks to discharge and site conditions in the presence of the primary on-site Facility representative and determined that all mechanical treatment units were in good condition and functioning properly.

The Facility's design capacity (design dry weather flow) is 5.24 million gallons per day (mgd). The Facility can treat up to 12.0 mgd during wet weather and can provide primary treatment up to 32.0 mgd during extended periods of wet weather. Flows above 12.0 mgd receive primary treatment and are then blended with secondary treated effluent prior to chlorination and discharge. Average dry weather flow for the period of November 2012 through February 2013 was approximately 4.0 mgd. The instantaneous influent flow was 7.6 mgd at 9:39 AM. Effluent flow is not monitored. Refer to the "Major Findings – Flow Measurement" section of this report for details.

The Facility's laboratory personnel conduct self-monitoring activities. Influent samples are collected at the headworks and effluent samples for Discharge Point 001 are collected from the effluent discharge pipe. Sample collection locations and methods appeared to provide representative samples. All samples are analyzed at an on-site laboratory and at contract laboratories.

Electronic self monitoring reports (eSMRs) and the "California Integrated Water Quality System (CIWQS) Violation Report" for the period of October 2012 through January 2013 were reviewed as a component of this inspection. Permit limit exceedances were identified and are presented in the attached "CIWQS Violation Report." The evaluation also included a comparison of data points reported in the eSMRs submitted to the North Coast Water Board against the laboratory bench sheets and contract laboratory reports documenting the actual analytical results. No discrepancies were identified.

Previous inspection reports were not reviewed prior to this inspection.

Major Findings

Flow Measurement

1. North Coast Water Board Order No. R1-2009-0033, Attachment E – Monitoring and Reporting Program, Provision IV.A.1, Table E-3 requires the Discharger to monitor flow at monitoring location EFF-001 continuously using a flow meter. The Discharger does not monitor flow, does not have a flow meter installed at EFF-001, and reports the daily influent flow monitored at Monitoring Location INF-001 as effluent flow on the monthly monitoring reports. The Discharger stated that the original design did not include an effluent flow meter and that the Discharger had not previously been told to monitor effluent flow.

Stormwater

1. North Coast Water Board Order No. R1-2009-0033, Provision VI.C.6.a requires that "For the control of stormwater discharged from the site of the wastewater treatment plant, if applicable, the Discharger shall obtain authorization to discharge under and meet the requirements of the State Water Board's Water Quality Order 97-03-DWQ, NPDES General Permit No. CAS000001, Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities (or subsequent renewed versions of the General Permit)." The Discharger discharges stormwater from the Facility at several locations to an offsite swale west of the Facility, which discharges to the adjacent Humboldt Bay. According to the primary on-site Facility representative, the Facility does not have coverage under the General Permit. During the inspection, he contacted the City of Eureka stormwater coordinator who stated that stormwater was managed under the City's MS4 stormwater permit. He further stated that he would acquire coverage under the general permit if the Facility was required to do so. The Facility does have a Storm Water Management Plan (SWMP) which appeared to be implemented.

Attachments:
CEI Photo Log
CEI Exhibit Log
CIWQS Violation Report

PERMIT: **OVERALL RATING: S**

INSPECTED ITEM	EVAL
1. Current copy of Facility's NPDES permit available on site.	S
2. Correct name and mailing address of permittee identified on NPDES permit.	S
3. Facility is as described in permit.	S
4. a. Notification given to Regional Water Board of process/production modifications, collection system expansions, etc. that impacted quality/quantity of discharge or changes to the Facility or increased discharge. b. Permit modification received, if required, prior to changes.	N N
5. Recent permit modifications, amendments or compliance orders on file.	S
6. Number of discharge outfalls the same as listed in the permit.	S
7. Name of receiving waters listed correctly in the permit.	S
8. Permit status (i.e., Current, Expired, or Extended)	Current
9. Permit renewal application submitted to the Regional Water Board at least 180 days prior to the expiration date.	N
10. Other:	N
Notes: ***This section was rated "satisfactory" because all checklist items reviewed were rated satisfactory.***	

RECORDS/REPORTS: **OVERALL RATING: M**

INSPECTED ITEM	EVAL
1. NPDES records maintained for the time period required (5 years): The following records and reports were requested and observed: ***- Current permit, monitoring and reporting program, and standard provisions*** ***- Latest four months of eSMRs (October 2012 through January 2013)*** ***- 2012 Annual Report (dated February 28, 2013)*** ***- 2012 Annual Biosolids Report (dated February 28, 2013)*** ***- Flow meter calibration records*** ***- Flow measurement records*** ***- Maintenance records*** ***- SWMP (undated)*** ***- Operation and maintenance (O&M) manual*** ***- Spill and bypass records*** ***- Operation log books*** ***- On-site laboratory certification and latest DMR QA report (dated June 20, 2012)*** ***- Contract laboratory records and chain-of-custodies***	Yes
2. a. Did the Facility document any spills or bypasses during the period reviewed?	No
b. Spills and bypasses reported and documented as required by the permit (i.e., as soon as possible, but no later than 24 hours from the time the permittee first became aware of the circumstances).	N
c. Follow-up written documentation given as required by the permit (within 5 days in most cases).	N
3. Discharge monitoring report (DMR) and/or self monitoring report (SMR) evaluation:	
a. The responsible person or designee signs and certifies the DMRs and/or SMRs.	S
b. The Facility monitors more frequently than required by the permit.	No
c. All data collected are summarized on the DMRs and/or SMRs.	S
d. Data reported on DMRs and/or SMRs is consistent with analytical results.	S
e. Coliform concentrations calculated as required by the permit (e.g., median, geometric mean).	S
f. Numerical values for minimum detection limits are reported on DMRs and/or SMRs when laboratory reports "Not Detected" or "0" (for example, MDL= 3, Report: "<3" on DMR).	S
g. "Less than values" properly carried through loading calculations.	S
h. Flow measurement period used for loading calculations brackets the sampling period.	M
i. Influent and/or effluent loading rates properly calculated; if required.	M
j. Number Exceeding (N.E.) properly reported on all DMRs and annual reports.	S
eSMRs, not DMRs, were reviewed as a component of this inspection. ***3h. and 3i. The Discharger does not measure effluent flow. The Discharger uses influent flow to calculate effluent loading rates. These checklist items are accounted for in the "Flow Measurement" section of this report.***	

RECORDS/REPORTS: **OVERALL RATING: M**

INSPECTED ITEM	EVAL
4. Reports completed in the timeframe and with the frequency required by the permit (not all reports required for all facilities):	
a. DMRs and/or SMRs	S
b. Biosolids Monitoring Reports	S
c. Biosolids Management Reports	N
d. CSO/ I&I Reports	N
e. Compliance Schedule Reports	N
f. Pretreatment Reports	N
g. Other:	N
4d. The collection system and associated records were not reviewed during the inspection.	
5. Sampling and analytical records (for water and biosolids) include:	
a. Dates, times, and location of sampling	S
b. Names of individuals performing sampling	S
c. Analytical methods	S
d. Results of analyses	S
e. Dates of analyses	S
f. Times of analyses, as necessary to verify holding times	M
g. Analysts' names or initials	S
h. Instantaneous flow at grab sample stations, if required	S
5f. The Discharger did not record the time of analysis for pH on laboratory bench sheets during the period of review in order to verify holding times. The Discharger was aware of the holding time requirement and stated that pH is analyzed immediately following sample collection. He stated that the pH analysis time would be recorded during future pH analyses.	
6. Plant records include:	
a. Daily plant operational records or log book	S
b. Equipment maintenance records and schedules	S
c. CSO/lift station check records or log book	N
d. Records of auxiliary power checks	N
e. Spill Prevention Control and Countermeasure (SPCC) plan	N
f. Pollution Prevention Plan (P3)	N
g. Stormwater Pollution Prevention Plan (SWPPP)	M
h. Influent and/or effluent flow measurement records maintained for the past three years	U
i. Other:	N
6g. The SWMP did not have a preparation date, revision date, or an adequately detailed map of on-site drainage patterns and drainage structure discharge points.	
6h. This checklist item is accounted for in the "Flow Measurement" section of this report.	
7. All records and reports required by the permit appear to be organized and available for inspection.	S

RECORDS/REPORTS:

OVERALL RATING: M

INSPECTED ITEM	EVAL
8. Other:	N

Notes:

This section was rated "marginal" due to checklist items 5f. and 6g. Checklist items 3h., 3i., and 6h. are accounted for in the "Flow Measurement" section of this report.

FACILITY SITE REVIEW: **OVERALL RATING: S**

INSPECTED ITEM	EVAL
1. All treatment units and supporting equipment are in service and functioning properly mechanically. ***The Facility's treatment train consists of the following:*** ***- One mechanically cleaned bar screen (in use)*** ***- One aerated grit chamber (in use)*** ***- Two primary clarifiers (both in use)*** ***- Two trickling filters (both in use)*** ***- One solids contact tank (in use)*** ***- Two secondary clarifiers (in use)*** ***- One chlorine contact basin (in use)*** ***- One effluent holding pond (in use)*** ***- Dechlorination by sulfur dioxide gas*** ***The Facility's solids handling process consists of the following:*** ***- Two anearobic digesters (used in series)*** ***- Two digested sludge storage ponds***	S
2. Hydraulic and organic loadings are consistent with the fact sheet and plant design criteria. a. Are there signs of overloading to the Facility and collection system, including I&I and septage loading?	S S
3. Peak flows remain within the established plant capacity. a. If flows have exceeded capacity, has the Regional Water Board been notified?	S S
4. Lift stations are properly monitored, maintained, have a backup power source and are not subject to chronic spills and/or overflows. ***Lift stations in the collection system were not reviewed as a component of this inspection.***	N
5. Odors are adequately controlled, resulting in limited complaints.	S
6. Residual chlorine monitoring is well documented and sampling/monitoring is representative of the discharge. a. If a UV system is used, the dosage intensity, tubes, and alarms are adequate, maintained and documented.	S N

FACILITY SITE REVIEW: **OVERALL RATING: S**

INSPECTED ITEM	EVAL
7. Housekeeping procedures are adequate to prevent release of pollutants to the environment:	
a. Adequate dikes and secondary containment	S
b. Spill containment and clean-up	S
c. Signs of spillage to soil, groundwater, or surface water	S
d. Stormwater and leachate management from storage piles	S
e. Leaking pipes, pumps, etc.	S
f. Drum and chemical storage areas	S
g. Minimization of pollutants entering stormwater outfalls	S
h. Other open dumps or debris piles	S
i. Other:	N
8. Signs of tank deterioration and/or settlement.	S
9. Safety concerns are present that may interfere with proper operation, maintenance, and/or monitoring.	S
10. Material Safety Data Sheets (MSDS) are available for stored chemicals.	S
11. Equipment available for spill cleanup and containment.	S
12. Other:	N
Notes: ***This section was rated "satisfactory" because all checklist items reviewed were rated satisfactory.***	

EFFLUENT AND RECEIVING WATERS: **OVERALL RATING: S**

INSPECTED ITEM	EVAL
1. Recent DMR and/or SMR history (last ***four*** months) (outfall number(s) ***001***):	
a. Violations of discharge limits	U
b. Spills/bypasses	S
c. Fish kills or other receiving water impacts	S
d. WET testing results are in accordance with the permit	S
e. If effluent limit violations have been identified, what actions has the Facility taken to eliminate or reduce their recurrence?	S
1a. Determination of effluent limit exceedances was made based upon a review of data contained within CIWQS. The Discharger reported a settleable solids violation and copper 6-month median limit violation during the month of November 2012. Refer to the attached "CIWQS Violation Report" for details of those violations.	
1e. The Discharger identified the root cause of the exceedances and appears to have taken appropriate actions to future occurrences. The settleable solids violation was a result of a lack of coordination between operations staff and laboratory staff in relation to maintenance activities and the sample collection time. The procedures have been modified to eliminate this problem. The copper 6-month median limit violation is a result of copper sourced in the collection system. The Discharger plans to address the copper limit in the upcoming permit renewal application. In the interim, the Discharger has directed the pretreatment staff to investigate the potential sources of copper in the collection system.	
2. DMR and/or SMR spot check	
conducted for the months of: ***October 2012 through January 2013***	
a. Internal lab sheets and contract lab results properly transferred to DMRs	S
b. Monthly average, weekly, maximum, etc., values correctly calculated per the permit	S
c. Influent and effluent loadings reported	S
d. DMR and/or SMR accurate and complete for each outfall	S
3. Appearance of effluent during inspection:	
a. The effluent(s) was viewed during the inspection	Yes
b. Excessive foam, scum, or sheens present	S
c. Cloudy and/or color	S
d. Excessive solids	S
e. Other:	N
The secondary effluent was viewed at the chlorine contact tank outfall (refer to Photo 2).	

EFFLUENT AND RECEIVING WATERS: OVERALL RATING: S

INSPECTED ITEM	EVAL
4. Appearance of receiving water(s) during inspection:	
a. The receiving water(s) was viewed during the inspection	No
b. Distinctly visible foam or sheens on receiving water	N
c. Biosolids accumulation or deposits of solids below discharge point(s)	N
d. Distinctly visible plume from discharge(s) to receiving water	N
e. Discharge creates objectionable odor at or near receiving water(s)	N
f. Other:	N
The Facility discharges 0.5 miles offshore into Humboldt Bay; therefore, the receiving water in the vicinity of the discharge point was not viewed.	
5. Other:	N
Notes: ***This section was rated "satisfactory" because all the identified exceedances appeared to be properly reported to the North Coast Water Board and are presented in the "CIWQS Violation Report."***	

FLOW MEASUREMENT: **OVERALL RATING: U**

INSPECTED ITEM	EVAL
1. Flow measurement devices and methods:	
Influent Measurement:	
Primary Device: *Parshall flume*	S
Secondary Device: *Ultrasonic transducer*	S
Effluent Measurement:	
Primary Device: *None present*	U
Secondary Device: *N/A*	N
Other method of estimating flow: *N/A*	N
The Discharger is required to monitor effluent flow volume. No effluent flow meter was present. Refer to the "Major Findings - Flow Measurement" section of this report for details.	
2. Flow measurement devices designed to meet permit requirements ("continuous measured," "continuous record," etc.).	U
This checklist item was accounted for in checklist item 1. above.	
3. Flow measurement location is representative of the actual discharge (considering return and bypass lines, etc.).	U
This checklist item was accounted for in checklist item 1. above.	
4. Flumes:	
a. Approach channel straight for at least 10 times the maximum head height in flume	S
b. Flow enters flume evenly distributed across the channel and free of turbulence, boils, or other disturbances	S
c. The flume is clean and free of debris or deposits	S
d. All flume dimensions appear accurate, level, and plumb	S
e. Flume head is being measured properly	S
f. Flume is appropriately sized to measure the existing range of flows	S
g. No obstructions downstream causing inaccurate flow measurement due to excessive "submergence" in flume	S
h. Proper flow tables being used	N

FLOW MEASUREMENT: **OVERALL RATING: U**

INSPECTED ITEM	EVAL
5. Weirs:	
a. Approach channel straight for at least 10 times the maximum head height	N
b. Flow in the approach channel is evenly distributed and free of turbulence, boils, or other disturbances	N
c. No solids accumulation in the bottom of the approach channel	N
d. Weir crest is located at least two times the maximum head height off the floor of the flow channel	N
e. The weir plate is level, plumb and without distortions	N
f. Weir is beveled on downstream side if plate is > 1/8 inch thick	N
g. No leakage around the weir plate	N
h. Measuring point located at least 3 times the maximum head height behind (upstream of) the weir	N
i. There is free-fall and access for air below the nappe of the weir (i.e., water doesn't cling to the weir plate)	N
j. Weir sized properly to measure the existing range of flows	N
k. Proper flow tables being used for weir type and size	N
6. Secondary flow device properly installed and maintained, and operating without interference from foam, turbulence, webs, etc.	S
7. Date of last flow meter calibrations:	
Influent: *4/25/2012*	S
Performed by: *Facility instrument technician*	
Effluent:	N
Performed by: *N/A*	
8. Calibration checks by plant personnel routinely performed.	S
9. Calibration records (external and internal checks) maintained.	S
10. Other:	N
Notes:	
This section was rated "unsatisfactory" due to checklist items 1., 2., and 3.	

SELF-MONITORING PROGRAM: **OVERALL RATING: S**

INSPECTED ITEM	EVAL
1. Sampling locations, type, methods, and frequencies conform to the NPDES permit for all required samples (including influent, effluent, biosolids, receiving stream, etc.). ***Details concerning the Discharger's self-monitoring activities can be found in the "Facility Narrative" section of this report.***	S
2. Sampling locations and methods provide representative samples.	
a. Grab samples are collected during peak flow conditions rather than low-stress conditions	S
b. Composite sampling procedures comply with the permit (time vs. flow weighted)	S
c. Other:	N
3. Automatic samplers and other sampling equipment are properly cleaned.	S
4. Samples are preserved using methods listed in 40 CFR, Part 136 (e.g., chilled, acidified).	S
5. Sample containers are as listed in 40 CFR, Part 136.	S
6. Chain of custody is maintained and documented.	S
7. Samples are collected using approved protocols:	
a. Coliform samples are collected directly into sterilized containers	S
b. BOD samples are collected prior to disinfection or reseeded	S
c. Oil and grease samples are collected directly into glass containers	S
d. Other:	N
8. Other:	N

Notes:

This section was rated "satisfactory" because all checklist items reviewed were rated satisfactory.

LABORATORY: **OVERALL RATING: S**

INSPECTED ITEM	EVAL
1. Onsite laboratory is ELAP-certified. a. List parameters analyzed at the onsite laboratory that are used for DMR reporting: ***BOD, turbidity, bacti, chlorine residual, DO, pH, and temperature*** b. List additional parameters analyzed for internal monitoring and process control: ***N/A*** ***ELAP Certification No. 1360, certification expires on October 31, 2014.***	Yes
2. EPA-approved analytical methods are used by the onsite laboratory.	S
3. Adequate equipment and procedures used for on-site analyses:	
a. BOD and CBOD	S
b. TSS	N
c. pH	S
d. Dissolved oxygen	S
e. Residual chlorine	S
f. Temperature	S
g. Other:	N
4. Onsite laboratory records include:	
a. Laboratory SOPs	S
b. Calibration and maintenance of equipment	S
c. Equipment operating instructions and manuals	S
5. Adequate spare parts and supplies for onsite analyses.	S
6. Results of latest external DMR QA or WP study are available and are acceptable. Date of last report: ***6/20/2012*** ***The results of the most recent DMR QA report were reviewed and a rating of "acceptable" was noted for each parameter.***	S
7. Satisfactory refrigeration in use.	S
8. Certified contract laboratory(s) being used:	S

LABORATORY: **OVERALL RATING: S**

INSPECTED ITEM		EVAL
Laboratory Name: ***North Coast Laboratories*** Visited? ***No*** Address: ***5680 West End Road*** ***Arcata, CA 95521-9202*** Phone: (***707***) ***822-4649*** Parameters: ***Inorganics, metals, and priority pollutants***	Laboratory Name: ***Aquatic Bioassay Consulting and Laboratories, Inc.*** Visited? ***No*** Address: ***29 North Olive Street*** ***Ventura, CA 93001*** Phone: (***805***) ***643-2930*** Parameters: ***Toxicity***	
9. EPA-approved analytical procedures are identified on contract lab report.		S
10. Holding times are being met by onsite and/or contract laboratory. a. pH measured in situ or within 15 minutes of sample collection. b. Residual chlorine measured in situ or within 15 minutes of sample collection. ***10a. This checklist item was accounted for in checklist item 5f. of the "Records/Reports" section of this report.***		 M S
11. Other:		N
Notes: ***This section was rated "satisfactory" because checklist item 10a. was accounted for in the "Records/Reports" section of this report.***		

OPERATIONS AND MAINTENANCE: OVERALL RATING: M

INSPECTED ITEM	EVAL
1. Preliminary treatment units (bar screens, comminuters, grit channels, etc.) properly maintained with wastes properly disposed.	S
2. Adequate oxygen maintained in aerated treatment systems.	S
3. No operational problems caused by hydraulic "short-circuiting" in treatment units.	S
4. Biosolids wasting/return rates adequate to maintain system equilibrium.	S
5. Operation and Maintenance (O&M) Manuals and supporting information organized and maintained for use: a. Plant O&M Manual b. Equipment manuals c. Plant engineering drawings d. Collection system drawings available or in development e. Maintenance records/costs	 S S N N S
6. Routine and preventive maintenance items are scheduled and performed on time.	S
7. The amount of maintenance activities and parts in backlog is acceptable. ***The backlog of preventive and routine maintenance activities appeared reasonable.***	S
8. Operational problems contributing to plant upset, excessive odors, effluent violations, etc.	S
9. Level of operator certification as required by the permit and staffing level as specified in O&M Manual. ***The Facility is rated as a Class III facility. The Facility is typically staffed 8.5 hours per day (8:00 AM to 4:30 PM) seven days per week. Facility operations are controlled and monitored via a supervisory control and data acquisition (SCADA) system. Operators have access to the SCADA system at the control center area and at various in-plant operations areas.*** ***The operations team consists of the following:*** ***- Two Grade IV*** ***- Two Grade II***	S
10. Auxiliary power available as required by the permit and operates the necessary treatment units. ***Power for the Facility is typically supplied by Pacific Gas and Electric (PG&E). In the event that power cannot be supplied by the local utility, power is supplied by an on-site cogeneration power plant. The Discharger is currently installing an emergency generator which will have the capability to run all essential processes.***	S

OPERATIONS AND MAINTENANCE: OVERALL RATING: M

INSPECTED ITEM	EVAL
11. Alarm systems for power and equipment failure. ***The Discharger uses a third party contractor to receive alarms and call the on-call operator. During a power surge in January 2012 the Facility experienced an electrical failure and loss of power. This initiated an alarm to the third party contractor who called the on-call operator. The operator failed to respond and the contractor failed to follow an escalation protocol. A lack of a timely response to the electrical issue caused a bypass of secondary treatment (refer to Exhibit 1). The primary on-site Facility representative has made a request to his management for an upgraded alarm system.***	M
12. Treatment control procedures are established for emergencies.	S
13. Hydraulic surges are handled without excessive solids wash-out or bypasses.	S
14. Spare pumps and parts readily available.	S
15. Facility appears to be well operated and maintained.	S
16. Other:	N
Notes: ***This section was rated "marginal" due to checklist item 11.***	

BIOSOLIDS/SOLID WASTE HANDLING AND DISPOSAL: OVERALL RATING: S

INSPECTED ITEM	EVAL
1. Biosolids/solid waste disposal/reuse method(s) (e.g., land application, landfill, etc.): ***Grit and screenings are hauled to a local landfill and biosolids are processed onsite. The Facility does not have a permanent solids handling method. The primary on-site Facility representative stated that Synagro, a contract biosolids company, brings temporary processing equipment to the site to process solids prior to disposal. The Discharger is studying alternative methods for processing solids at the Facility. One of two solids holding ponds is nearly full (refer to Photo 3).***	M
2. Biosolids/solid waste disposal/reuse location(s): ***Grit and Screenings are hauled to the Anderson Landfill, Shasta County.***	S
3. The above processes are in accordance with the permit.	S
4. Storage at Facility: a. Adequately sized for periods of inclement weather b. Controls leachate, runoff, and public access	 S S
5. Recent analytical results for metals (biosolids) are within permit limits.	N
6. Biosolids land application records include: a. Farm maps and land owner agreements b. Soil nutrient analyses done within the last year for active sites c. Records showing loading rate to each site d. Pathogen/Vector reduction records (pH or temperature logs, etc.)	 N N N N
7. Other:	N

Notes:

This section was rated "satisfactory" because the inspector did not believe that checklist item 1. was significant enough to downgrade the overall rating to marginal.

STORMWATER: **OVERALL RATING: U**

INSPECTED ITEM	EVAL
1. Facility stormwater discharges are covered under the Facility's individual NPDES permit or the California General Permit for Storm Water Discharges Associated with Industrial Activity (NOI is available). a. If no, should the Facility have submitted an NOI for coverage under the California General Permit for Storm Water Discharges Associated with Industrial Activity? (NPDES CAS000001). ***1a. Based on the release of stormwater for areas of industrial activity (refer to Photo 4), it appears that the Facility should have submitted a Notice of Intent (NOI) for coverage under the General Permit for Storm Water Discharge Associated with Industrial Activity. Refer to the "Major Findings - Stormwater" section of this report for details.***	No Yes
2. The Facility had a Stormwater Pollution Prevention Plan (SWPPP) available for onsite review.	S
3. Pollutant sources (materials and practices) are adequately controlled (inside, undercover).	S
4. Appropriate best management practices (BMPs) deployed.	S
5. BMPs are being maintained (e.g., waddles and hay bales are intact).	N
6. Designated outfalls and sampling locations are identified.	N
7. Other:	N
Notes: ***This section was rated "unsatisfactory" due to checklist item 1a.***	

City of Eureka – Elk River Wastewater Treatment Facility
(NPDES No. CA0024449) Photo Log
Inspected by: Craig Blett (PG Environmental, LLC) and Cathy Goodwin (North Coast Water Board)

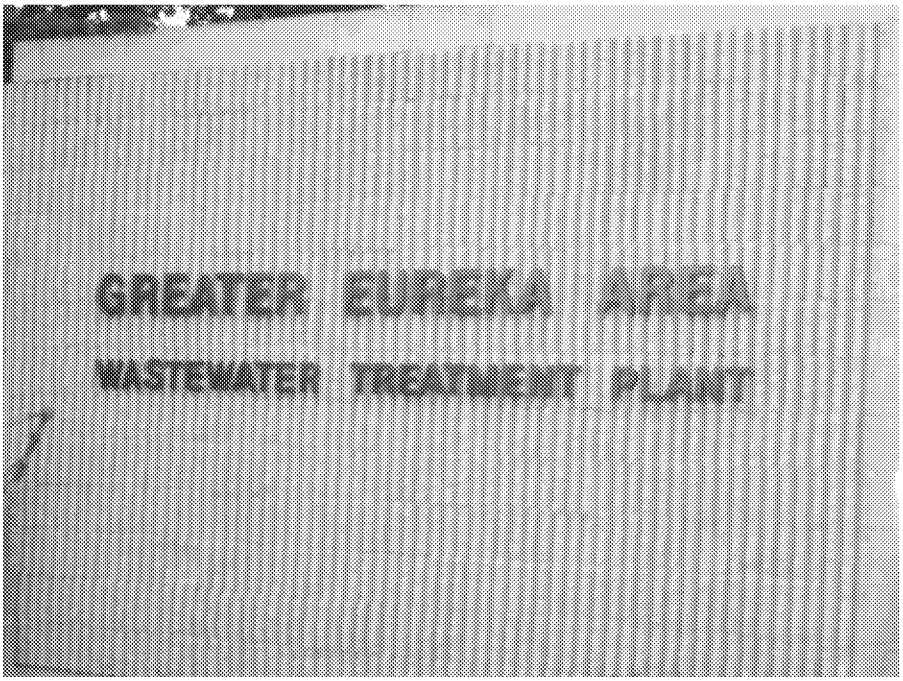

Photo 1: Facility Entrance Sign.

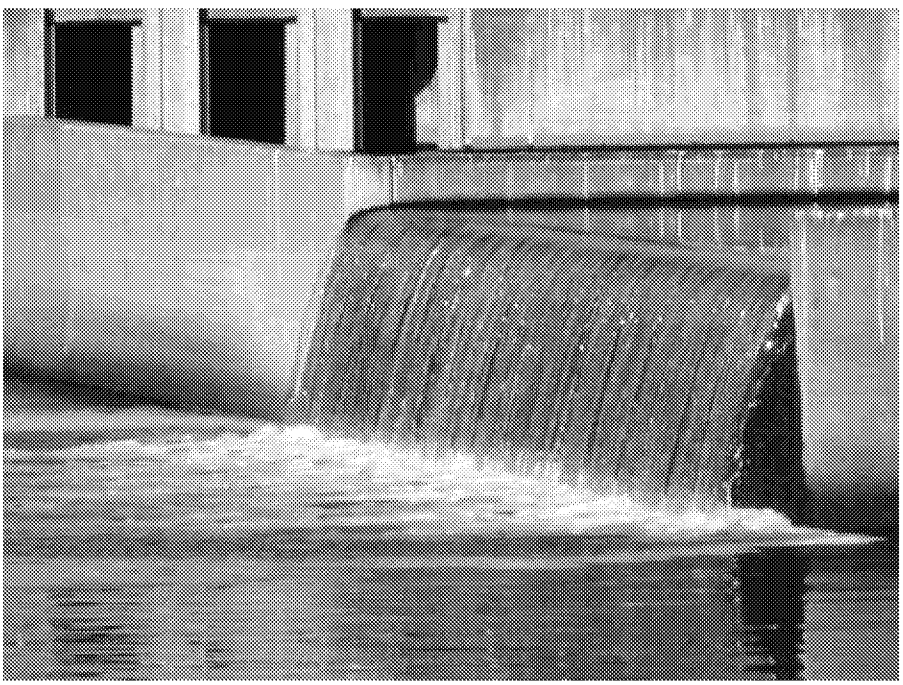

Photo 2: Effluent viewed discharging from the chlorine contact tank to the effluent holding pond.

Photo 3: One of two sludge holding ponds which was observed to be nearly full at the time of inspection.

Photo 4: One of multiple storm drains which discharge to an off-site drainage area. This storm drain is located on the west side of the loop access road west of the secondary clarifiers.

City of Eureka – Elk River Wastewater Treatment Facility
(NPDES No. CA0024449) Photo Log
Inspected by: Craig Blett (PG Environmental, LLC) and Cathy Goodwin (North Coast Water Board)

CB
3-15-13

CITY OF EUREKA

February 3, 2012

Mr. Charles Reed
Regional Water Quality Control Bd., North Coast Region
5550 Skylane Blvd., Suite A
Santa Rosa, CA 95405

RE: Waste Discharge Violation Notification

Dear Mr. Reed:

Pursuant to the provisions of the WDR and NPDES permit for the City of Eureka Elk River POTW is this report of non-compliance.

On Saturday January 28th at approximately 5:00 pm the Elk River facility experienced a power spike that caused the main circuit breaker to trip. Unfortunately, it also caused the CHP (digester) engine breaker to open eliminating all power to the facility. This activated an alarm to Advanced Security Systems which is under contract with the city to provide callout service when an alarm occurs at the plant. They then attempted to contact City of Eureka personnel serving on standby duty for response purposes. The protocol at the time was to contact this person using a pager. The person on standby is then instructed to call Advanced Security using a city provided cell phone to acknowledge the pager call. The pager unit did not receive the call and following protocol the alarm company attempted to call the city cell phone. Unfortunately the person on standby did not have the cell phone on his person and missed three attempts to contact him in this manner. The alarm company then called two other city pagers not in use at the time. The last and final call was supposed to be to Eureka Police Department. The EPD has an emergency callout list of all city staff employed at the treatment plant and they are instructed to make sure they contact someone from the facility. However, Advanced Security did not make contact with EPD and the alarm went unanswered until staff arrived shortly before 8:00 am on Sunday morning to begin their day shift. I was contacted at 8:30 am due to staff working to get the facility operational again. I arrived on site at 9:00 am and was informed that the plant became operational at approximately 8:30 am.

When the power goes off all setting at the plant default to the position they were in at the time of the power outage. At the time of the power failure the plant was in a discharge window and therefore the effluent holding pond valve was in the open position allowing effluent to flow to Humboldt Bay during the outgoing tide. However, with no power the trickling filter pumps stopped causing the plant to go into bypass mode. This allows primary effluent to bypass secondary treatment and divert directly to the effluent holding pond.

Exhibit 1: Letter to the North Coast Water Board from the City of Eureka discussing the bypass of treatment caused when a third party alarm contractor failed to follow contact procedures (Page 1 of 2).

At the time of the event the effluent discharge was approximately one hour and thirty minutes into the "window" which means the holding pond was relatively full of secondary treated effluent. We estimate that the mixing of primary and secondary effluent ceased at approximately 11:00 pm and from that time until 8:30 am the next morning the discharge was entirely primary effluent. Per my verbal report to you on Sunday morning we estimated the flow at 3.2 million gallons from 5:00 pm until 8:30 the next day. That number doesn't include the amount of secondary effluent that was in the holding pond.

Because the flow was relatively high when the breaker tripped (eight MGD), the chlorine dosing was estimated at an 11.2 mg/L average during the discharge. This is higher than our normal dosage of around 7 mg/L due to the fact that the dosage settings defaulted to the value at the time the power went out and the dosage is flow paced. As the influent flows diminished during the night the dosing rate remained the same resulting in higher that average chemical dosages. We believe this helped contribute to decent disinfection of the partly treated effluent. No sampling occurred during the event but staff simulated this in the lab by taking primary effluent and dosing it with chlorine at the 11.2 rate to see if an adequate disinfection could have happened during the event. The lab result was 2 MPN for total coliform which is lower than our normal results for secondary effluent. The sulfur dioxide system was still operational so we believe there were no chlorine residual issues.

Due to the disinfection component staff felt that the event was not likely to result in a *significant* threat to human health or the environment. Therefore the State OES was not notified. However, as a precautionary measure we did contact Eric Trevena at the CDPH because of the shellfish culture in the bay. He stated he would contact the appropriate agencies under his prevue. He also reported that due to a raw sewage spill from HCSD earlier in the week the oyster growers were already under a no harvest order. Although one company, Coast Oyster that been cleared to harvest on Sunday, they decided to cancel harvesting under further testing was conducted.

We are currently taking measures to remedy the situation which caused this event. Our goal is to significantly reduce the risk of this happening again. First was to redo the protocol with the alarm company including adding more contacts to their list and eliminating the two pagers that were not being used. On February 2nd we held a staff meeting to discuss the event. One of the topics was clearly stating the City of Eureka's expectations of employees' assigned standby duty. In addition, a disciplinary action is pending with the employee who did not respond to the alarm call out.

The City of Eureka is planning a project to install a new standby generator at the facility that will include automatic switchover capabilities. We also plan to look into what is necessary to make our existing electrical system more robust and then budget to install or replace components to achieve this need. The City of Eureka is also currently under contract to install a new SCADA system. When this system is installed it will allow the use of an auto-dialer system to make calls. This will eliminate the need for a security company with questionable service.

If you have any questions regarding this report please contact me at (707) 441-4360.

Sincerely,

Bruce Gehrke

Bruce Gehrke, Utility Operations Manager

cc: Bruce Young, Director of Public Works
Eric Trevena, CA Department of Public Health (email attachment)

City of Eureka – Elf River Wastewater Treatment Facility
(NPDES No. CA0024449) Exhibit Log
Inspected by: Craig Blett (PG Environmental, LLC) and Cathy Goodwin (North Coast Water Board)

Exhibit 1: Letter to the North Coast Water Board from the City of Eureka discussing the bypass of treatment caused when a third party alarm contractor failed to follow contact procedures (Page 2 of 2).

City of Eureka – Elk River Wastewater Treatment Facility
(NPDES No. CA0024449) CIWQS Violation Report
Inspected by: Craig Blett (PG Environmental, LLC) and Cathy Goodwin (North Coast Water Board)

California Home — Friday, March 08, 2013

CA.GOV CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
STATE WATER RESOURCES CONTROL BOARD

California Integrated Water Quality System Project (CIWQS)

FACILITY AT-A GLANCE REPORT

[NEW PRINTER FRIENDLY VERSION][EXPORT THIS REPORT TO EXCEL]

General Information

Region	Place ID	Place Name	Place Type	Place Address	Place County
1	223010	Eureka City Elk River WWTP	Wastewater Treatment Facility	4301 Hilfiker Eureka, CA, 95501	Humboldt

Related Parties

Party	Party Type	Party Name	Role	Classification	Relationship Start Date	Relationship End Date
524053	Person	George Bruce Gehrke	Is Onsite Manager For		09/27/2010	
520555	Person	Bruce Gehrke	Is Onsite Manager For		06/24/2010	
523201	Person	Michael Hansen	Is A Data Submitter For		06/24/2010	
374507	Person	Bruce Young	Is Onsite Manager For		04/20/2007	
15824	Organization	Eureka City	Owner	City Agency	08/22/2002	

Total Related Parties:5

Regulatory Measures

Reg Measure ID	Reg Measure Type	Region	Program	Order No.	WDID	Effective Date	Expiration Date	Status	Amended?
368420	NPDES Permit	1	PTPRG	R1-2009-0033	1B82151OHUM	07/24/2009	07/24/2014	Active	N
368420	NPDES Permit	1	NPDES	R1-2009-0033	1B82151OHUM	07/24/2009	07/24/2014	Active	N
132748	NPDES Permit	1	NPDES	R1-2004-0013	1B82151OHUM	03/24/2004	03/23/2009	Historical	N
132746	NPDES Permit	1	PTPRG	R1-2004-0013	1B82151OHUM	03/24/2004	03/23/2009	Historical	N
139239	NPDES Permit	1	NPDES	98-008	1B82151OHUM	02/26/1998	02/25/2003	Historical	N
137988	NPDES Permit	1	NPDES	93-025	1B82151OHUM	02/25/1993	02/25/1998	Historical	N
137598	NPDES Permit	1	NPDES	87-124	1B82151OHUM	10/29/1987	10/28/1992	Historical	N
136978	NPDES Permit	1	NPDES	82-151	1B82151OHUM	12/03/1982	12/03/1987	Historical	N

Total Reg Measures:8

Violations

Violation ID	Occurred Date	Violation Type	(+) Violation Description	Corrective Action	Status	Classification	Source
941402	11/30/2012	CAT1	Settleable Solids Daily Maximum limit is 0.2 ml/L/hr and reported value was 1.5	Pumps will be more routinely run to keep solids from building in the wet wells below them.	Violation	U	eSMR
941403	11/15/2012	CAT2	Copper, Total 6-Month Median limit is 33 ug/L and reported value was 35 ug/L.	Additional sampling is being done around town to pin-point where the copper is coming from, but appears to be non-point	Violation	U	eSMR
924682	09/01/2012	OEV	Fecal Coliform 10% for 30 days limit is 10 % and reported value was 20 %.	We turned chlorine feeds up to remedy this situation.	Violation	U	eSMR
919891	01/28/2012	DMON	Fecal Coliform samples taken on 1/26/12 and 1/27/12 due to blending caused by hi	We are working toward an upgrade with our electrical back up system and call-out procedures	Violation	U	eSMR
919892	01/28/2012	Order Conditions	Due to a power outage, Effluent was discharged outside of an approved window. (	We are in the process of upgrading backup electrical system and call-out procedures.	Violation	U	eSMR
910675	08/20/2011	CAT2	Chlorine, Total Residual Daily Maximum limit is 17.8 lb/day and reported value w	PLC fixed.	Violation	U	eSMR
910674	08/20/2011	CAT2	Chlorine, Total Residual Daily Maximum limit is 248 ug/L and reported value was	PLC fixed.	Violation	U	eSMR
910676	08/19/2011	CAT2	Chlorine, Total Residual Daily Maximum limit is 248 ug/L and reported value was	PLC fixed.	Violation	U	eSMR
893658	12/29/2010	DMON	BOD Influent sample had insufficient depletion due to dilution by rainwater. Th	A wider range of dilutions will be used for future tests.	Violation	2	eSMR
882066	08/20/2010	DMON	Due to laboratory error, we were unable to quantify BOD data for the week of 8/2	Lab will be more observant of set up and read dates in the future.	Violation	2	eSMR
882096	08/20/2010	DMON			Violation	2	Report